RES024 - A Different View

The proposal is actually a continuation of a long-term effort to eliminate a useful, cost effective, credible and broadly used program. The absence of the validity of that effort is addressed in this submittal as well as an explanation of the value of the REA program.

What was clearly missed in the RES024 review is that environmental work is truly multi-disciplinary in nature and scope. Expertise and experience in several disciplines are required to solve problems. This reality is clearly laid out in the EPA's new proposal of a triad approach. This recognizes that a multi-disciplinary team is essential for efficient cost and technically effective solutions. A key factor is experience, and the common thread is chemistry. We remove **chemicals** from soil, water and air. We dispose of soil because it is **chemically** contaminated. We analyze and evaluate background or normal environments **chemically**. We measure progress, success and failure with **chemical** concentration. In short, without experience and a very solid academic foundation in chemistry, environmental work is certain to be unnecessarily costly, very poorly planned, unsuccessful or can even make the problem worse. There is no licensing format for chemists. Hence, the Consumer Affairs' approach by itself is not a realistic way to ensure environmental protection.

The key purpose in establishing a Registered Environmental Assessor (REA) program in the first place was to develop a pool of documentable experienced personnel to perform property assessments and other professionally responsible environmental activities such as permitting, wastewater treatment evaluation, compliance program development and review, waste evaluation and minimization, material substitution plans, stormwater plans, health and safety plans, hazardous materials management training and project planning, coordination and management. It was very clear that the registration and licenses provided by the Department of Consumer Affairs were simply not getting it done. REAs are restricted to areas where they actually have experience. Thousands of Phase I Environmental Site Assessments are performed in this state every year. The standard generally used is outlined by the American Society for Testing and Materials (ASTM) E 1527-00. I know of no lending institution that operates any where in this state that does not require this service on any significant transaction of a commercial or industrial property involving a financial aspect. They all require REA signatures. Sure it is nice if you are a PE or an RG, but you must also be an REA. Interestingly, at a national level, the EPA is conducting hearings as to what constitutes a qualified professional to do this work that leads to a finding of "all appropriate inquiry" for the innocent landowner defense. The professional engineering associations do not believe that their license covers this work comprehensively. They are advising their members to not use their license number or seal on

these reports. They believe the multi-disciplinary nature of the work exceeds this specific license requirement. Geologists do not appear to have such ethical reservations.

Abandoning the REA program which is heavily accessed and used would be a serious blow to property refinance and sale in this state.

The REA II program was initiated in response to serious failures in the environmental area due to a lack of an interdisciplinary approach. The program sets out rigorous standards of experience and documentation of success. (If you haven't closed a site successfully, you don't qualify.) The program has been successful but certainly has annoyed some licensed disciplines. The key is that REA IIs are expected to know their limitations and engage and manage professionals to fill the gaps.

The suggestion is that since no test is required the program is invalid. Actually, the opposite is true. Reassessment of credentials and success is required every five years. This is very different in our fast-changing field than the idea that passing a test **once** qualifies the person for life, particularly when environmental work may not have even been contemplated!

There is a long-standing effort by the Geologist "Union" to

eliminate all other disciplines. (See J. Moskowitz article enclosed.) The irony is that while earth science is an essential element in some environmental work, geology is the discipline that is the most unprepared of the sciences and engineering to deal with the broad spectrum of environmental issues. Little chemistry is required for this field and no micro analyses experience. Yet, many geologists seem to be more than willing to evaluate and opine on issues for which they are woefully inadequately prepared. The real problem is that geologists have defined their field so broadly that according to them it covers nearly everything.

I recently had a Registered Geologist (RG) explain to me that if I walked across an open field with a bottle and a trowel I was fine. If I stopped and put soil in the bottle, I was practicing geology. If asked what was in the bottle, and I said, "dirt", then I was giving a geological opinion. This is the absurdity that we are experiencing today.

What follows are a few examples for which I have personal knowledge:

(1) A Phase I Environmental Site Assessment was performed for an old plating shop by a national firm. Three Registered Geologists signed off and stamped the work. The plating lines were on the ground floor, and there was a basement. They noted black, oily-looking stains

on the basement wall and stated this was an indication of past mishandling of lubricants and not a recognized environmental condition (REC) and of environmental concern. They indicated the yellow water in the basement sump was probably an oxide of iron, and since the basement and sump were made of concrete and in good condition, this was also not an REC.

The black stain was chromic acid at more than 500,000 parts per million (ppm). The yellow water was the same material diluted to less than 100 ppm. Off-site contamination remediation costs were in the 8-figure range. The issue was resolved in an out-of-court settlement.

Any chemist or professional with industrial experience would have recognized the problem. In order for an REA to do this Phase I, experience with plating shops would be required. Clearly the registrations governed by the Department of Consumer Affairs did not protect the public.

(2) Recently a report was submitted detailing a site safe and clear of lead. Many samples were taken and analyzed. A risk assessment based on that data was performed, and the site was deemed suitable for any use.

The geologist who took the samples and wrote the report failed to note that the site appeared to be covered with paint chips up to two inches in diameter. The site looked like a New Year's Eve party floor after the confetti was thrown. The paint chips were analyzed and contained 43,000 parts per million (ppm) lead. A single chip ingested by a child would have severe medical consequences. To suggest that geology was the right discipline to render an opinion in this case because soil samples were taken is strange at best.

(3) An anomalous finding of carbon tetrachloride was found in a new groundwater monitoring well. The geologist report recommended an additional subsurface investigation to locate the source. Fortunately the oversight consultant (an experienced chemist) had sampled the water used during well installation. It was contaminated. The source of the purge water was never established, but unfortunately it had been introduced into the near surface aquifer.

Incidents like this are common. There is general lack of understanding as to how small a mass of chemical can create a serious environmental evaluation problem. Sampling to reproducibly detect contaminants in the microgram range requires extreme care. The real problem is that once the sample is

submitted, the lab results reflect the approach that was used without reservation. Unfortunately, we still see WD 40 on drill rigs and in geologists' tool kits. (If this spray lubricant is used in the drilling or sampling operation, all hydrocarbon findings are suspect.) We still see inadequate decontamination of sample gear, and we still see leather gloves used in sampling.

Worst of all, we see the selection of data and evaluation of data that is nonsense--presented as fact. We see positive values reported for materials in the field when in the given situation the instrument is reporting water vapor.

After working with state programs for 40 years, I can say that one of the two most effective and least costly programs ever is the REA program. It should be continued. It is heavily used and is the only environmental program that is interdisciplinary.

On further evaluation, I know there is no state certification for chemists, but no licensed professional should be allowed to review and opine on matters chemical without the oversight and concurrence of a member with the appropriate experience and in good standing of the American Chemical Society or American Institute of Chemists. This is just basic common sense.

DAVID L. BAUER
President